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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/425,027	10/25/1999	TAKASHI SHIMIZU	104610	8990
25944	7590	02/27/2004	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			GOFF II, JOHN L.	
			ART UNIT	PAPER NUMBER
			1733	

DATE MAILED: 02/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/425,027	Applicant(s) SHIMIZU ET AL.	
	Examiner John L. Goff	Art Unit 1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-20 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-20 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/22/03 has been entered. In view of the amendment to the claims the previous 35 USC 112 rejections are withdrawn.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Objections

3. Claim 20 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 18 was amended to include the limitations in claim 20 (See lines 20, 21, 23, and 24 of claim 18).

Claim Rejections - 35 USC § 112

4. Claim 19 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 19 requires "wherein the bonding is performed by bonding the surface of the hot melt adhesive in the pattern to the film of hot melt adhesive". It is noted the specification discloses a single invention and that is bonding the hot melt adhesive in the pattern directly to the film of hot melt adhesive. The specification does not suggest any alternative bonding arrangements such that applicants invention as claimed in the independent claim appears to require this limitation. It is suggested applicant incorporate the language of claim 19 into the independent claim.

5. Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 19 requires "wherein the bonding is performed by bonding the surface of the hot melt adhesive in the pattern to the film of hot melt adhesive". This limitation is confusing as the specification describes only one embodiment and that is bonding the hot melt adhesive in the pattern directly to the film of hot melt adhesive. The specification does not suggest any alternative bonding arrangements such that applicants invention as claimed in the independent claim appears to require this limitation. It is suggested applicant incorporate the language of claim 19 into the independent claim.

Claim Rejections - 35 USC § 103

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (Specification pages 1 and 2 and the response submitted 4/12/02) in view of Elliott et al. (U.S. Patent 5,087,311) and any one of Colasanto (U.S. Patent 6,190,482), Jarrell et al. (U.S. Patent 5,750,444), Spielau et al. (U.S. Patent 3,850,725), or Wu (U.S. Patent 5,539,072).

The admitted prior art teaches a known method for manufacturing a formed headliner for a vehicle (Figures 4A and 4B and Specification page 1 and 2 and the response submitted 4/12/02). The admitted prior art teaches a top cover member comprising a top cover and polyurethane foam wherein a film of hot melt adhesive is laminated on the backside of the top cover member. The admitted prior art teaches a base member comprising a polyamide film, a polypropylene film, a base material (flat/plate-like), and a non-woven fabric wherein a film of hot melt adhesive is laminated on the frontside of the base member. The admitted prior art teaches heating the base member to soften the base and melt the adhesive applied thereon. The admitted prior art teaches bonding and forming (i.e. press forming) the top cover member to the

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heated base member (the heated base member melts the adhesive of the top member) to form a headliner. The hot melt adhesive of the base member has a thickness of 15 to 75 μm for normal strength and 75 to 100 μm for high strength. The admitted prior art is silent as to applying the adhesive layer to the top cover member in a pattern. However, it would have been well within the purview of one of ordinary skill in the art at the time the invention was made to apply the adhesive layer on the top cover member as either a film or web as both were well known and conventional alternatives in the art as shown for example by Elliott et al. as only the expected results would be achieved. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use an adhesive layer in a pattern on the top cover member as it was well known in the art to apply adhesive to a permeable member in a pattern as shown for example by any one of Colasanto, Jarrell et al., Spielau et al., or Wu so that when the permeable member is bonded to a substrate the laminate remains permeable, i.e. during and/or after bonding air and/or vapor would still be able to pass through at the permeable member.

Regarding the particular melt adhesive used, it is noted the admitted prior art is not limited to any particular type. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the melt adhesive in the admitted prior art any well known and conventional melt adhesive known in the headliner art such as polyamide melt adhesive as suggested by Elliott et al. as only the expected results would be achieved. As to the adhesive density, it would have been obvious to one of ordinary skill in the art at the time the invention was made to experimentally determine the adhesive density as a function of the bond strength produced as doing so would have required nothing more than ordinary skill and routine experimentation. Additionally, it would have been obvious to use any well known and

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conventional density taught by the art such as 18 g/m^2 as suggested by Elliott et al. as only the expected results would be achieved.

Regarding the top cover member, the admitted prior art is silent as to the top cover comprising tricot. However, one of ordinary skill in the art at the time the invention was made would have readily appreciated the top cover comprising this well known and conventional material (as shown for example by Elliot et al.) as only the expected results would be achieved.

Regarding the base member, the admitted prior art is silent as to all of the particulars of the base member such as using as the base material a thermoplastic resin of fiber and polypropylene or the particular thickness of the polyamide layer. However, (as noted in previous Office Actions) the base member taught by the admitted prior art is the same as that claimed, i.e. both are conventional base members used in the art to form headliners, such that one of ordinary skill in the art would expect both to have the same particulars. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the base member, polyamide layer, etc. any of the well known and conventional materials in the art having the claimed particulars as only the expected results would be achieved.

Elliott et al. disclose a process of forming a headliner. Elliott et al. teach a top cover member comprising a top cover (e.g. tricot) and a layer of hot melt adhesive (e.g. polyamide) applied thereon. The hot melt adhesive is applied as a particulate, film, or web at a density of for example 18 g/m^2 . Elliott et al. teach bonding the top cover member to a base member in a press forming step (Column 1, line 14 and Column 2, lines 56-57 and 60 and Column 3, lines 35-36 and 45-50 and Column 5, lines 23-25).

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Colasanto is directed to laminating a permeable fabric to a substrate (which may be air permeable or non-air-permeable) using a patterned (discontinuous) adhesive so that the fabric remains breathable (Figures 1-6 and Column 1, lines 13-20 and Column 2, lines 12-15 and Column 3, lines 35-45 and Column 4, lines 1-4 and 43). Jarrell et al. are directed to laminating two materials such as breathable fabric and foam (not required to be breathable/permeable) using a patterned adhesive to ensure the fabric of the bonded laminate is breathable (Column 1, lines 9-16 and Column 2, lines 40-43 and Column 3, lines 25-32 and Column 5, lines 23-28, 46-49, and 54-57). Jarrell et al. teach the breathable laminates are useful in automobiles as for example headliners (Column 2, lines 40-43 and Column 4, lines 4-6). Spielau et al. are directed to bonding various materials, e.g. permeable and non-permeable materials, using a patterned adhesive. Spielau et al. teach using the patterned adhesive to ensure the adhesive does not interfere with the breathing qualities of the material (Column 1, lines 3-8 and Column 3, lines 16-22). Wu is directed to bonding a fabric to a substrate using an adhesive in a discontinuous pattern so the laminated material retains its water-vapor permeable properties (Column 5, lines 35-39).

8. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art, Elliott et al., and any one of Colasanto, Jarrell et al., Spielau et al., or Wu as applied to claims 18-20 above, and further in view of Shimizu (U.S. Patent 5,695,865).

The admitted prior art, Elliott et al., and any one of Colasanto, Jarrell et al., Spielau et al., or Wu as applied above teach all of the limitations in claim 22 except for the particulars of the bonding/press forming operation.

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Regarding the use of a cold press, it is noted the admitted prior art teaches the base member is heated and then pressed to the top cover member in a forming step (i.e. intrinsically a cold press is used). It would have been obvious to one of ordinary skill in the art at the time the invention was made that the forming step is performed by a cold press as the bonding/press forming operation described by the admitted prior art is exemplary of a cold press forming process as shown for example by Shimizu.

Regarding the time of bonding/press forming, the admitted prior art is silent as to any particular duration, and Elliott et al. teach conventional bonding/press forming times are 45 to 60 seconds (Column 6, lines 15-16). It would have been obvious to one of ordinary skill in the art at the time the invention was made to perform the bonding/press forming operation taught by the admitted prior art as modified by Elliott et al. and any one of Colasanto, Jarrell et al., Spielau et al., or Wu for a well known and conventional duration such as 45 to 60 seconds as suggested by Elliott et al. only the expected results being achieved.

Regarding the use of clamps, the admitted prior art is silent as to using clamps in the bonding/press forming operation. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to perform the bonding/press forming operation taught by the admitted prior art as modified by Elliott et al. and any one of Colasanto, Jarrell et al., Spielau et al., or Wu using clamps to position the top cover member and base member within the mold as was well known and conventional in the art as shown for example by Shimizu.

Shimizu discloses a conventional molding process wherein clamps are used to position the individual layers of the molded product within the mold. Shimizu further describes a cold press forming process as heating one of the molding layers to a softened state, placing the layers

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within the mold, and cold pressing the layers to form a molded product (Figures 6, 7, and 21 and Column 3, lines 37-45 and Column 7, lines 12-15 and 62-67 and Column 8, lines 1-13).

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is (571) 272-1216. The examiner can normally be reached on M-F (7:15 AM - 3:45 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John L. Goff
February 13, 2004



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